

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0003 **USGS Hydrologic Unit:** 051202070706
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: CR 600 South **Latitude:** 38 47 36.72884 **Longitude:** -85 53 2.67155
Drainage: **Site Number:** 21T-001

SiteID: WEM090-0003 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45460
Water Flow Type Glide **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	88.6 %		ASTM D888-09(C)
DO	10.63 mg/L		ASTM D888-09(C)
pH (Field)	7.94 SU		EPA 150.2
Specific Conductance (Field)	340 umho/cm		SM2510B
Temperature	7.7 °C		SM2550B(2)
Turbidity (Hach)	24.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-195822-7	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	120 mg/L	5	SM2320B
Chloride	14 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	19 mg/L	5	SM2540D
Solids, Total (TS)	250 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	86 mg/L	10	SM2540C
Sulfate	18 mg/L	1	EPA 300.0
Calcium (Total)	46 mg/L	0.2	EPA 200.7
Magnesium (Total)	10 mg/L	0.1	EPA 200.7
COD	16 mg/L	10	SM5220C
Nitrogen, Ammonia	0.14 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.2 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.083 mg/L	0.05	SM4500P-E
TKN	0.55 mg/L	0.4	SM4500N(Org)-D
TOC	3 mg/L	1	SM5310C

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM090-0003

Sample Date: 4/13/2021

IDEM Sample #: AB46236

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	81.8 %		ASTM D888-09(C)
DO	8.27 mg/L		ASTM D888-09(C)
pH (Field)	7.67 SU		EPA 150.2
Specific Conductance (Field)	269 umho/cm		SM2510B
Temperature	14.9 °C		SM2550B(2)
Turbidity (Hach)	50 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-23	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	99 mg/L	5	SM2320B
Chloride	11 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	37 mg/L	5	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	11 mg/L	0.4	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.3 mg/L	0.1	EPA 200.7
COD	32 mg/L	10	SM5220C
Nitrogen, Ammonia	0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.51 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.19 mg/L	0.05	SM4500P-E
TKN	1.1 mg/L	0.4	SM4500N(Org)-D
TOC	7.6 mg/L	1	SM5310C

Lab ID #: AB46236	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	416 MPN/100mL	1	SM9223B

Weather Code Definitions				
SC	WD	WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0 North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9 East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18 South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27 West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist			4 - Mod./Strong	5 - 76-85
6 - Fog			5 - Strong	6 - > 86
7 - Shower			6 - Gale	

**Indiana Department of Environmental Management
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Surface Water Results Summary**

SiteID: WEM-07-0010 USGS Hydrologic Unit: 051202070706
 Stream Name: Grassy Creek County: Jackson
 Description: CR 600 Latitude: 38 47 38.57330 Longitude: -85 52 9.53353
 Drainage: Site Number: 21T-002

SiteID: WEM-07-0010 Sample Date: 4/13/2021 IDEM Sample #: AB46235
 Water Flow Type: Glide Water Appearance: Brown Water Depth: Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed %: 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	69.3 %		ASTM D888-09(C)
DO	7.06 mg/L		ASTM D888-09(C)
pH (Field)	7.61 SU		EPA 150.2
Specific Conductance (Field)	495 umho/cm		SM2510B
Temperature	14.6 °C		SM2550B(2)
Turbidity (Hach)	25.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-22	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	160 mg/L	5	SM2320B
Chloride	39 mg/L	4	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	5	SM2540D
Solids, Total (TS)	250 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	270 mg/L	10	SM2540C
Sulfate	13 mg/L	1	EPA 300.0
Calcium (Total)	49 mg/L	0.2	EPA 200.7
Magnesium (Total)	13 mg/L	0.1	EPA 200.7
COD	34 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.32 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.7 mg/L	0.05	SM4500P-E
TKN	1.2 mg/L	0.4	SM4500N(Org)-D
TOC	11 mg/L	1	SM5310C

Lab ID #: AB46235	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	186 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0008 **USGS Hydrologic Unit:** 051202070706
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: CR 400 South **Latitude:** 38 49 19.42466 **Longitude:** -85 53 3.10163
Drainage: **Site Number:** 21T-003

SiteID: WEM090-0008 **Sample Date:** 4/13/2021 **IDEM Sample #:** AB46234
Water Flow Type: Glide **Water Appearance:** Brown **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments: Lots of corn stubble just upstream in the water, affecting flow.

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	54.7 %		ASTM D888-09(C)
DO	5.65 mg/L		ASTM D888-09(C)
pH (Field)	7.34 SU		EPA 150.2
Specific Conductance (Field)	282 umho/cm		SM2510B
Temperature	13.9 °C		SM2550B(2)
Turbidity (Hach)	33.3 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-21	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	15 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	5	SM2540D
Solids, Total (TS)	150 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	12 mg/L	0.4	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.9 mg/L	0.1	EPA 200.7
COD	24 mg/L	10	SM5220C
Nitrogen, Ammonia	0.22 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.6 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.19 mg/L	0.05	SM4500P-E
TKN	1.2 mg/L	0.4	SM4500N(Org)-D
TOC	7.7 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46234	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	410.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0015 **USGS Hydrologic Unit:** 051202070706
Stream Name: John McDonald Ditch **County:** Jackson
Description: CR 125 South **Latitude:** 38 51 46.92645 **Longitude:** -85 50 44.12462
Drainage: **Site Number:** 21T-005

SiteID: WEM-07-0015 **Sample Date:** 4/13/2021 **IDEM Sample #:** AB46233
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	56.2 %		ASTM D888-09(C)
DO	5.8 mg/L		ASTM D888-09(C)
pH (Field)	7.32 SU		EPA 150.2
Specific Conductance (Field)	267 umho/cm		SM2510B
Temperature	13.4 °C		SM2550B(2)
Turbidity (Hach)	37 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-20	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	99 mg/L	5	SM2320B
Chloride	17 mg/L	1	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	9 mg/L	5	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	190 mg/L	10	SM2540C
Sulfate	6.2 mg/L	0.4	EPA 300.0
Calcium (Total)	31 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.8 mg/L	0.1	EPA 200.7
COD	45 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.052 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.2 mg/L	0.05	SM4500P-E
TKN	1.1 mg/L	0.4	SM4500N(Org)-D
TOC	15 mg/L	1	SM5310C

Lab ID #: AB46233	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	290.9 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0021 USGS Hydrologic Unit: 051202070705
 Stream Name: Tea Creek County: Jennings
 Description: CR 650 South Latitude: 38 53 17.94956 Longitude: -85 4 20.64590
 Drainage: Site Number: 21T-006

SiteID: WEM-07-0021 Sample Date: 4/12/2021 IDEM Sample #: AB46223
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	102.9 %		ASTM D888-09(C)
DO	10.66 mg/L		ASTM D888-09(C)
pH (Field)	7.91 SU		EPA 150.2
Specific Conductance (Field)	238 umho/cm		SM2510B
Temperature	13.8 °C		SM2550B(2)
Turbidity (Hach)	48.2 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-197635-11	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	82 mg/L	5	SM2320B
Chloride	13 mg/L	1	EPA 300.0
Hardness (as CaCO3)	100 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	5	SM2540D
Solids, Total (TS)	160 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	9.9 mg/L	1	EPA 300.0
Calcium (Total)	29 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.4 mg/L	0.1	EPA 200.7
COD	38 mg/L	10	SM5220C
Nitrogen, Ammonia	0.62 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.7 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.9 mg/L	0.05	SM4500P-E
TKN	1.6 mg/L	0.4	SM4500N(Org)-D
TOC	11 mg/L	1	SM5310C

Lab ID #: AB46223	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0029 USGS Hydrologic Unit: 051202070705
 Stream Name: Tea Creek County: Jennings
 Description: CR 650 West Latitude: 38 53 9.76552 Longitude: -85 43 52.69889
 Drainage: 10.6 Site Number: 21T-007

SiteID: WEM070-0029 Sample Date: 4/12/2021 IDEM Sample #: AB46222
 Water Flow Type Run Water Appearance Brown Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	93.2 %		ASTM D888-09(C)
DO	9.88 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	238 umho/cm		SM2510B
Temperature	12.7 °C		SM2550B(2)
Turbidity (Hach)	47.1 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-197635-10	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	86 mg/L	5	SM2320B
Chloride	12 mg/L	1	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	19 mg/L	5	SM2540D
Solids, Total (TS)	150 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	10 mg/L	1	EPA 300.0
Calcium (Total)	31 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.2 mg/L	0.1	EPA 200.7
COD	39 mg/L	10	SM5220C
Nitrogen, Ammonia	0.48 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.65 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.67 mg/L	0.05	SM4500P-E
TKN	1.6 mg/L	0.4	SM4500N(Org)-D
TOC	18 mg/L	10	SM5310C

Lab ID #: AB46222	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	1986.3 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0039 **USGS Hydrologic Unit:** 051202070705
Stream Name: Vernon Fork Muscatatuck River **County:** Jennings
Description: CR 500 South **Latitude:** 38 54 39.57440 **Longitude:** -85 43 48.30341
Drainage: 233.46 **Site Number:** 21T-008

SiteID: WEM070-0039 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45455
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
	% Sat	92.2 %	ASTM D888-09(C)
	DO	11.28 mg/L	ASTM D888-09(C)
	pH (Field)	8.03 SU	EPA 150.2
	Specific Conductance (Field)	369 umho/cm	SM2510B
	Temperature	6.7 °C	SM2550B(2)
	Turbidity (Hach)	13.6 NTU	EPA 180.1
	Air Temp	2 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	1 Lookup	Observation

Lab ID #: 500-195822-2	Result	Reporting Limit	Method	
	Alkalinity (as CaCO3)	150 mg/L	5	SM2320B
	Chloride	11 mg/L	1	EPA 300.0
	Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
	Solids, Suspended Total, (TSS)	9 mg/L	5	SM2540D
	Solids, Total (TS)	240 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	66 mg/L	10	SM2540C
	Sulfate	16 mg/L	1	EPA 300.0
	Calcium (Total)	54 mg/L	0.2	EPA 200.7
	Magnesium (Total)	12 mg/L	0.1	EPA 200.7
	COD	11 mg/L	10	SM5220C
	Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.6 mg/L	0.1	SM4500NO3-F
	Phosphorus, Total	0.077 mg/L	0.05	SM4500P-E
	TKN	0.48 mg/L	0.4	SM4500N(Org)-D
	TOC	2.1 mg/L	1	SM5310C

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0039

Sample Date: 4/12/2021

IDEM Sample #: AB46242

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	87.6 %		ASTM D888-09(C)
DO	9.15 mg/L		ASTM D888-09(C)
pH (Field)	7.9 SU		EPA 150.2
Specific Conductance (Field)	247 umho/cm		SM2510B
Temperature	13.3 °C		SM2550B(2)
Turbidity (Hach)	68.4 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-197635-8	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	93 mg/L	5	SM2320B
Chloride	9.9 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	49 mg/L	5	SM2540D
Solids, Total (TS)	190 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	140 mg/L	10	SM2540C
Sulfate	11 mg/L	1	EPA 300.0
Calcium (Total)	33 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.8 mg/L	0.1	EPA 200.7
COD	36 mg/L	10	SM5220C
Nitrogen, Ammonia	0.18 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.64 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.24 mg/L	0.05	SM4500P-E
TKN	1.1 mg/L	0.4	SM4500N(Org)-D
TOC	7.1 mg/L	1	SM5310C

Lab ID #: AB46242	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

Weather Code Definitions				
SC	WD	WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0 North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9 East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18 South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27 West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist			4 - Mod./Strong	5 - 76-85
6 - Fog			5 - Strong	6 - > 86
7 - Shower			6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0020 **USGS Hydrologic Unit:** 051202070705
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: US 31 **Latitude:** 38 54 21.96418 **Longitude:** -85 49 15.82271
Drainage: 291.14 **Site Number:** 21T-009

SiteID: WEM070-0020 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45458
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	87.4 %		ASTM D888-09(C)
DO	10.68 mg/L		ASTM D888-09(C)
pH (Field)	7.6 SU		EPA 150.2
Specific Conductance (Field)	355 umho/cm		SM2510B
Temperature	6.7 °C		SM2550B(2)
Turbidity (Hach)	21.9 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-195822-5	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	12 mg/L	2	EPA 300.0
Hardness (as CaCO3)	170 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	16 mg/L	5	SM2540D
Solids, Total (TS)	250 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	150 mg/L	10	SM2540C
Sulfate	18 mg/L	2	EPA 300.0
Calcium (Total)	51 mg/L	0.2	EPA 200.7
Magnesium (Total)	11 mg/L	0.1	EPA 200.7
COD	8.7 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.4 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.55 mg/L	0.4	SM4500N(Org)-D
TOC	2.4 mg/L	1	SM5310C

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0020

Sample Date: 4/13/2021

IDEM Sample #: AB46230

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	83.6 %		ASTM D888-09(C)
DO	8.52 mg/L		ASTM D888-09(C)
pH (Field)	7.75 SU		EPA 150.2
Specific Conductance (Field)	257 umho/cm		SM2510B
Temperature	14.5 °C		SM2550B(2)
Turbidity (Hach)	54.2 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-18	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	94 mg/L	5	SM2320B
Chloride	12 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	41 mg/L	5	SM2540D
Solids, Total (TS)	160 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	150 mg/L	10	SM2540C
Sulfate	12 mg/L	1	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.7 mg/L	0.1	EPA 200.7
COD	21 mg/L	10	SM5220C
Nitrogen, Ammonia	0.19 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.56 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.23 mg/L	0.05	SM4500P-E
TKN	0.9 mg/L	0.4	SM4500N(Org)-D
TOC	6.7 mg/L	1	SM5310C

Lab ID #: AB46230	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	727 MPN/100mL	1	SM9223B

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0015 **USGS Hydrologic Unit:** 051202070706
Stream Name: Vernon Fork Muscatatuck River **County:** Jackson
Description: CR 50 North **Latitude:** 38 53 18.85460 **Longitude:** -85 51 6.07579
Drainage: 363.63 **Site Number:** 21T-010

SiteID: WEM090-0015 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45459
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	% Sat	89.1 %	ASTM D888-09(C)
	DO	10.73 mg/L	ASTM D888-09(C)
	pH (Field)	8.05 SU	EPA 150.2
	Specific Conductance (Field)	354 umho/cm	SM2510B
	Temperature	7.2 °C	SM2550B(2)
	Turbidity (Hach)	18.5 NTU	EPA 180.1
	Air Temp	3 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	1 Lookup	Observation

<u>Lab ID #:</u> 500-195822-6	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>	
	Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
	Chloride	14 mg/L	2	EPA 300.0
	Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
	Solids, Suspended Total, (TSS)	13 mg/L	5	SM2540D
	Solids, Total (TS)	250 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	52 mg/L	10	SM2540C
	Sulfate	18 mg/L	2	EPA 300.0
	Calcium (Total)	47 mg/L	0.2	EPA 200.7
	Magnesium (Total)	11 mg/L	0.1	EPA 200.7
	COD	13 mg/L	10	SM5220C
	Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
	Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
	TKN	0.58 mg/L	0.4	SM4500N(Org)-D
	TOC	2.7 mg/L	1	SM5310C

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM090-0015

Sample Date: 4/13/2021

IDEM Sample #: AB46231

Water Flow Type Glide

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	82.7 %		ASTM D888-09(C)
DO	8.43 mg/L		ASTM D888-09(C)
pH (Field)	7.73 SU		EPA 150.2
Specific Conductance (Field)	267 umho/cm		SM2510B
Temperature	14.5 °C		SM2550B(2)
Turbidity (Hach)	44.5 NTU		EPA 180.1
Air Temp	4 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-19	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	96 mg/L	5	SM2320B
Chloride	15 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	30 mg/L	5	SM2540D
Solids, Total (TS)	140 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	160 mg/L	10	SM2540C
Sulfate	12 mg/L	0.4	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.2 mg/L	0.1	EPA 200.7
COD	26 mg/L	10	SM5220C
Nitrogen, Ammonia	0.17 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.52 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.21 mg/L	0.05	SM4500P-E
TKN	0.48 mg/L	0.4	SM4500N(Org)-D
TOC	7.1 mg/L	1	SM5310C

Lab ID #: AB46231	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	488.4 MPN/100mL	1	SM9223B

Weather Code Definitions				
SC	WD	WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0 North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9 East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18 South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27 West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist			4 - Mod./Strong	5 - 76-85
6 - Fog			5 - Strong	6 - > 86
7 - Shower			6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0015 USGS Hydrologic Unit: 051202070704
 Stream Name: Sandy Branch County: Jackson
 Description: US 31 Latitude: 38 55 52.33966 Longitude: -85 50 2.43408
 Drainage: 7.89 Site Number: 21T-011

SiteID: WEM080-0015 Sample Date: 4/13/2021 IDEM Sample #: AB46229
 Water Flow Type Run Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	88.3 %		ASTM D888-09(C)
DO	9.33 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	476 umho/cm		SM2510B
Temperature	12.8 °C		SM2550B(2)
Turbidity (Hach)	6.11 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-17	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	180 mg/L	5	SM2320B
Chloride	57 mg/L	4	EPA 300.0
Hardness (as CaCO3)	240 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	2.5 mg/L	5	SM2540D
Solids, Total (TS)	290 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	310 mg/L	10	SM2540C
Sulfate	26 mg/L	4	EPA 300.0
Calcium (Total)	67 mg/L	0.2	EPA 200.7
Magnesium (Total)	18 mg/L	0.1	EPA 200.7
COD	7.7 mg/L	10	SM5220C
Nitrogen, Ammonia	0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.53 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.075 mg/L	0.05	SM4500P-E
TKN	0.55 mg/L	0.4	SM4500N(Org)-D
TOC	3.5 mg/L	1	SM5310C

Lab ID #: AB46229	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	613.1 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0014 **USGS Hydrologic Unit:** 051202070704
Stream Name: Mutton Creek Ditch **County:** Jackson
Description: CR 400 North **Latitude:** 38 56 26.63883 **Longitude:** -85 48 56.24634
Drainage: 29.58 **Site Number:** 21T-012

SiteID: WEM080-0014 **Sample Date:** 4/13/2021 **IDEM Sample #:** AB46228
Water Flow Type: Glide **Water Appearance:** Brown **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	59.3 %		ASTM D888-09(C)
DO	6 mg/L		ASTM D888-09(C)
pH (Field)	7.42 SU		EPA 150.2
Specific Conductance (Field)	294 umho/cm		SM2510B
Temperature	14.6 °C		SM2550B(2)
Turbidity (Hach)	23.3 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-16	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	18 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	11 mg/L	5	SM2540D
Solids, Total (TS)	170 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	16 mg/L	0.4	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.8 mg/L	0.1	EPA 200.7
COD	27 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.71 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.25 mg/L	0.05	SM4500P-E
TKN	0.84 mg/L	0.4	SM4500N(Org)-D
TOC	8.8 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46228	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	648.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0016 **USGS Hydrologic Unit:** 051202070704
Stream Name: Tributary of Mutton Creek **County:** Jackson
Description: CR 700 North **Latitude:** 38 59 2.20225 **Longitude:** -85 49 42.77626
Drainage: **Site Number:** 21T-013

SiteID: WEM-07-0016 **Sample Date:** 4/13/2021 **IDEM Sample #:** AB46224
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	90 %		ASTM D888-09(C)
DO	9.66 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	399 umho/cm		SM2510B
Temperature	12.1 °C		SM2550B(2)
Turbidity (Hach)	10.3 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-12	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	26 mg/L	1	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	5 mg/L	5	SM2540D
Solids, Total (TS)	210 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	220 mg/L	10	SM2540C
Sulfate	18 mg/L	1	EPA 300.0
Calcium (Total)	48 mg/L	0.2	EPA 200.7
Magnesium (Total)	14 mg/L	0.1	EPA 200.7
COD	23 mg/L	10	SM5220C
Nitrogen, Ammonia	0.16 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.7 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.065 mg/L	0.05	SM4500P-E
TKN	0.53 mg/L	0.4	SM4500N(Org)-D
TOC	5.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46224	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	307.6 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0027 USGS Hydrologic Unit: 051202070704
 Stream Name: Mutton Creek County: Jackson
 Description: CR 800 North Latitude: 38 59 55.12075 Longitude: -85 48 22.97647
 Drainage: 18.19 Site Number: 21T-014

SiteID: WEM080-0027 Sample Date: 4/12/2021 IDEM Sample #: AB46221
 Water Flow Type Riffle Water Appearance Clear Water Depth Algae?
 Water Flow (cf/sec): Flow Estimated? Aquatic Life? Canopy Closed % 0-20%
 Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	84.1 %		ASTM D888-09(C)
DO	9.15 mg/L		ASTM D888-09(C)
pH (Field)	7.5 SU		EPA 150.2
Specific Conductance (Field)	274 umho/cm		SM2510B
Temperature	11.6 °C		SM2550B(2)
Turbidity (Hach)	39.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-1	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	93 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	20 mg/L	5	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	18 mg/L	0.4	EPA 300.0
Calcium (Total)	32 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.3 mg/L	0.1	EPA 200.7
COD	29 mg/L	10	SM5220C
Nitrogen, Ammonia	0.28 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.65 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.35 mg/L	0.05	SM4500P-E
TKN	0.86 mg/L	0.4	SM4500N(Org)-D
TOC	9.2 mg/L	1	SM5310C

Lab ID #: AB46221	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0025 **USGS Hydrologic Unit:** 051202070704
Stream Name: Mutton Creek **County:** Jennings
Description: CR 300 North **Latitude:** 39 1 40.68763 **Longitude:** -85 45 55.47689
Drainage: 8.3 **Site Number:** 21T-015

SiteID: WEM080-0025 **Sample Date:** 4/12/2021 **IDEM Sample #:** AB46232
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.2 %		ASTM D888-09(C)
DO	10.23 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	284 umho/cm		SM2510B
Temperature	11.6 °C		SM2550B(2)
Turbidity (Hach)	20 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-2	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	100 mg/L	5	SM2320B
Chloride	11 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	7.5 mg/L	5	SM2540D
Solids, Total (TS)	150 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	22 mg/L	1	EPA 300.0
Calcium (Total)	34 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.8 mg/L	0.1	EPA 200.7
COD	29 mg/L	10	SM5220C
Nitrogen, Ammonia	0.11 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.47 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.059 mg/L	0.05	SM4500P-E
TKN	0.68 mg/L	0.4	SM4500N(Org)-D
TOC	12 mg/L	10	SM5310C

<u>Lab ID #:</u> AB46232	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	488.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0013 **USGS Hydrologic Unit:** 051202070703
Stream Name: Storm Creek Ditch **County:** Jackson
Description: CR 400 North **Latitude:** 38 56 25.99130 **Longitude:** -85 48 21.34228
Drainage: 18.19 **Site Number:** 21T-016

SiteID: WEM080-0013 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45457
Water Flow Type: Glide **Water Appearance:** Brown **Water Depth:** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %:** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	83.7 %		ASTM D888-09(C)
DO	10.24 mg/L		ASTM D888-09(C)
pH (Field)	8.15 SU		EPA 150.2
Specific Conductance (Field)	303 umho/cm		SM2510B
Temperature	6.7 °C		SM2550B(2)
Turbidity (Hach)	18.8 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-195822-4	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	82 mg/L	5	SM2320B
Chloride	10 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	10 mg/L	5	SM2540D
Solids, Total (TS)	170 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	98 mg/L	10	SM2540C
Sulfate	13 mg/L	0.4	EPA 300.0
Calcium (Total)	30 mg/L	0.2	EPA 200.7
Magnesium (Total)	8 mg/L	0.1	EPA 200.7
COD	28 mg/L	10	SM5220C
Nitrogen, Ammonia	< 0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.56 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.099 mg/L	0.05	SM4500P-E
TKN	0.67 mg/L	0.4	SM4500N(Org)-D
TOC	5.4 mg/L	1	SM5310C

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0013

Sample Date: 4/13/2021

IDEM Sample #: AB46227

Water Flow Type Glide

Water Appearance Murky

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	70.7 %		ASTM D888-09(C)
DO	7.12 mg/L		ASTM D888-09(C)
pH (Field)	7.66 SU		EPA 150.2
Specific Conductance (Field)	306 umho/cm		SM2510B
Temperature	15.1 °C		SM2550B(2)
Turbidity (Hach)	13.3 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-15	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	110 mg/L	5	SM2320B
Chloride	13 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6.5 mg/L	5	SM2540D
Solids, Total (TS)	140 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	150 mg/L	10	SM2540C
Sulfate	13 mg/L	1	EPA 300.0
Calcium (Total)	33 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.2 mg/L	0.1	EPA 200.7
COD	28 mg/L	10	SM5220C
Nitrogen, Ammonia	0.14 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.21 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.16 mg/L	0.05	SM4500P-E
TKN	0.48 mg/L	0.4	SM4500N(Org)-D
TOC	8.8 mg/L	1	SM5310C

Lab ID #: AB46227	Result	Reporting Limit	Method
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B
E. coli	137.6 MPN/100mL	1	SM9223B

Weather Code Definitions				
SC	WD	WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0 North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9 East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18 South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27 West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist			4 - Mod./Strong	5 - 76-85
6 - Fog			5 - Strong	6 - > 86
7 - Shower			6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM080-0005 **USGS Hydrologic Unit:** 051202070703
Stream Name: Tributary to Richart Lake **County:** Jennings
Description: CR 900 West **Latitude:** 38 58 10.31116 **Longitude:** -85 46 38.64888
Drainage: 1.6 **Site Number:** 21T-017

SiteID: WEM080-0005 **Sample Date:** 4/13/2021 **IDEM Sample #:** AB46226
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	84.2 %		ASTM D888-09(C)
DO	8.96 mg/L		ASTM D888-09(C)
pH (Field)	7.74 SU		EPA 150.2
Specific Conductance (Field)	457 umho/cm		SM2510B
Temperature	12.5 °C		SM2550B(2)
Turbidity (Hach)	18.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-14	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	130 mg/L	5	SM2320B
Chloride	36 mg/L	2	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	6 mg/L	5	SM2540D
Solids, Total (TS)	240 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	260 mg/L	10	SM2540C
Sulfate	45 mg/L	2	EPA 300.0
Calcium (Total)	46 mg/L	0.2	EPA 200.7
Magnesium (Total)	15 mg/L	0.1	EPA 200.7
COD	21 mg/L	10	SM5220C
Nitrogen, Ammonia	0.11 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.46 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.062 mg/L	0.05	SM4500P-E
TKN	0.71 mg/L	0.4	SM4500N(Org)-D
TOC	7.4 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46226	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	2419.6 MPN/100mL	1	SM9223B
E. coli	365.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM-07-0014 **USGS Hydrologic Unit:** 051202070703
Stream Name: Storm Creek **County:** Jennings
Description: Base Road **Latitude:** 38 58 59.52422 **Longitude:** -85 47 12.15271
Drainage: **Site Number:** 21T-018

SiteID: WEM-07-0014 **Sample Date:** 4/13/2021 **IDEM Sample #:** AB46225
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

Lab ID #:	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	84 %		ASTM D888-09(C)
DO	8.8 mg/L		ASTM D888-09(C)
pH (Field)	7.86 SU		EPA 150.2
Specific Conductance (Field)	355 umho/cm		SM2510B
Temperature	13.3 °C		SM2550B(2)
Turbidity (Hach)	11.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	4 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-13	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	15 mg/L	1	EPA 300.0
Hardness (as CaCO3)	160 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	4 mg/L	5	SM2540D
Solids, Total (TS)	170 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	180 mg/L	10	SM2540C
Sulfate	22 mg/L	1	EPA 300.0
Calcium (Total)	44 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	19 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.29 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.069 mg/L	0.05	SM4500P-E
TKN	0.58 mg/L	0.4	SM4500N(Org)-D
TOC	6.3 mg/L	1	SM5310C

Lab ID #: AB46225	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	1553.1 MPN/100mL	1	SM9223B
E. coli	193.5 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0017 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 500 South **Latitude:** 38 54 40.15219 **Longitude:** -85 45 44.37870
Drainage: **Site Number:** 21T-019

SiteID: WEM-07-0017 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45456
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments: Excessive corn residue in the stream from recent flooding

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
	% Sat	89.6 %	ASTM D888-09(C)
	DO	11.15 mg/L	ASTM D888-09(C)
	pH (Field)	8.18 SU	EPA 150.2
	Specific Conductance (Field)	350 umho/cm	SM2510B
	Temperature	5.9 °C	SM2550B(2)
	Turbidity (Hach)	24.6 NTU	EPA 180.1
	Air Temp	2 Lookup	Observation
	Sky Conditions	1 Lookup	Observation
	Wind Direction	0 Lookup	Observation
	Wind Strength	1 Lookup	Observation

<u>Lab ID #:</u> 500-195822-3	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>	
	Alkalinity (as CaCO3)	83 mg/L	5	SM2320B
	Chloride	28 mg/L	2	EPA 300.0
	Hardness (as CaCO3)	130 mg/L	0.91	SM2340B
	Solids, Suspended Total, (TSS)	13 mg/L	5	SM2540D
	Solids, Total (TS)	220 mg/L	10	SM2540B
	Solids, Total Dissolved (TDS)	130 mg/L	10	SM2540C
	Sulfate	36 mg/L	2	EPA 300.0
	Calcium (Total)	38 mg/L	0.2	EPA 200.7
	Magnesium (Total)	9.8 mg/L	0.1	EPA 200.7
	COD	18 mg/L	10	SM5220C
	Nitrogen, Ammonia	0.17 mg/L	0.2	SM4500NH3-G
	Nitrogen, Nitrate+Nitrite	1.3 mg/L	0.1	SM4500NO3-F
	Phosphorus, Total	0.14 mg/L	0.05	SM4500P-E
	TKN	0.6 mg/L	0.4	SM4500N(Org)-D
	TOC	3.4 mg/L	1	SM5310C

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0017

Sample Date: 4/12/2021

IDEM Sample #: AB46243

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	96.7 %		ASTM D888-09(C)
DO	10.07 mg/L		ASTM D888-09(C)
pH (Field)	7.89 SU		EPA 150.2
Specific Conductance (Field)	355 umho/cm		SM2510B
Temperature	13.5 °C		SM2550B(2)
Turbidity (Hach)	26.1 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

Lab ID #: 500-197635-9	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	91 mg/L	5	SM2320B
Chloride	30 mg/L	2	EPA 300.0
Hardness (as CaCO3)	130 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	28 mg/L	5	SM2540D
Solids, Total (TS)	240 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	< 10 mg/L	10	SM2540C
Sulfate	35 mg/L	2	EPA 300.0
Calcium (Total)	36 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.6 mg/L	0.1	EPA 200.7
COD	28 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.52 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.11 mg/L	0.05	SM4500P-E
TKN	0.85 mg/L	0.4	SM4500N(Org)-D
TOC	5.8 mg/L	1	SM5310C

Lab ID #: AB46243	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	727 MPN/100mL	1	SM9223B

Weather Code Definitions				
SC	WD	WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0 North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9 East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18 South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27 West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist			4 - Mod./Strong	5 - 76-85
6 - Fog			5 - Strong	6 - > 86
7 - Shower			6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0018 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 200 South **Latitude:** 38 57 15.78425 **Longitude:** -85 43 55.69768
Drainage: **Site Number:** 21T-020

SiteID: WEM-07-0018 **Sample Date:** 4/12/2021 **IDEM Sample #:** AB46241
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	100.8 %		ASTM D888-09(C)
DO	10.55 mg/L		ASTM D888-09(C)
pH (Field)	8.11 SU		EPA 150.2
Specific Conductance (Field)	334 umho/cm		SM2510B
Temperature	13.3 °C		SM2550B(2)
Turbidity (Hach)	17.6 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-7	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	90 mg/L	5	SM2320B
Chloride	32 mg/L	1	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	12 mg/L	5	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	190 mg/L	10	SM2540C
Sulfate	29 mg/L	1	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	8.7 mg/L	0.1	EPA 200.7
COD	18 mg/L	10	SM5220C
Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.29 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.088 mg/L	0.05	SM4500P-E
TKN	0.89 mg/L	0.4	SM4500N(Org)-D
TOC	5.8 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46241	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	488.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0019 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 175 North **Latitude:** 39 0 36.34528 **Longitude:** -85 42 17.91439
Drainage: **Site Number:** 21T-021

SiteID: WEM-07-0019 **Sample Date:** 4/12/2021 **IDEM Sample #:** AB46237
Water Flow Type Run **Water Appearance** Murky **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	96.4 %		ASTM D888-09(C)
DO	9.88 mg/L		ASTM D888-09(C)
pH (Field)	8.03 SU		EPA 150.2
Specific Conductance (Field)	362 umho/cm		SM2510B
Temperature	14.2 °C		SM2550B(2)
Turbidity (Hach)	16.4 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-3	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	93 mg/L	5	SM2320B
Chloride	35 mg/L	2	EPA 300.0
Hardness (as CaCO3)	120 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	15 mg/L	5	SM2540D
Solids, Total (TS)	190 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	200 mg/L	10	SM2540C
Sulfate	28 mg/L	1	EPA 300.0
Calcium (Total)	35 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.8 mg/L	0.1	EPA 200.7
COD	28 mg/L	10	SM5220C
Nitrogen, Ammonia	0.12 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.29 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.13 mg/L	0.05	SM4500P-E
TKN	0.92 mg/L	0.4	SM4500N(Org)-D
TOC	6.1 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46237	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	93.4 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM-07-0020 **USGS Hydrologic Unit:** 051202070702
Stream Name: Sixmile Creek **County:** Jennings
Description: CR 415 North **Latitude:** 39 2 44.73366 **Longitude:** -85 40 35.18964
Drainage: **Site Number:** 21T-022

SiteID: WEM-07-0020 **Sample Date:** 4/12/2021 **IDEM Sample #:** AB46238
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	93.8 %		ASTM D888-09(C)
DO	10.17 mg/L		ASTM D888-09(C)
pH (Field)	7.8 SU		EPA 150.2
Specific Conductance (Field)	403 umho/cm		SM2510B
Temperature	11.7 °C		SM2550B(2)
Turbidity (Hach)	41.9 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	3 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-4	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	99 mg/L	5	SM2320B
Chloride	54 mg/L	4	EPA 300.0
Hardness (as CaCO3)	140 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	13 mg/L	5	SM2540D
Solids, Total (TS)	280 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	290 mg/L	10	SM2540C
Sulfate	32 mg/L	1	EPA 300.0
Calcium (Total)	40 mg/L	0.2	EPA 200.7
Magnesium (Total)	9.8 mg/L	0.1	EPA 200.7
COD	35 mg/L	10	SM5220C
Nitrogen, Ammonia	0.13 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.73 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.13 mg/L	0.05	SM4500P-E
TKN	0.98 mg/L	0.4	SM4500N(Org)-D
TOC	9.3 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46238	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	648.8 MPN/100mL	1	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0036 **USGS Hydrologic Unit:** 051202070701
Stream Name: Vernon Fork Muscatatuck River **County:** Jennings
Description: CR 400 West **Latitude:** 38 57 15.46163 **Longitude:** -85 41 5.94729
Drainage: 219.11 **Site Number:** 21T-023

SiteID: WEM070-0036 **Sample Date:** 3/8/2021 **IDEM Sample #:** AB45454
Water Flow Type Run **Water Appearance** Clear **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	94.3 %		ASTM D888-09(C)
DO	11.78 mg/L		ASTM D888-09(C)
pH (Field)	7.85 SU		EPA 150.2
Specific Conductance (Field)	208 umho/cm		SM2510B
Temperature	5.8 °C		SM2550B(2)
Turbidity (Hach)	11.4 NTU		EPA 180.1
Air Temp	2 Lookup		Observation
Sky Conditions	1 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	1 Lookup		Observation

<u>Lab ID #:</u> 500-195822-1	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	140 mg/L	5	SM2320B
Chloride	11 mg/L	1	EPA 300.0
Hardness (as CaCO3)	180 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	7 mg/L	5	SM2540D
Solids, Total (TS)	240 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	170 mg/L	10	SM2540C
Sulfate	16 mg/L	1	EPA 300.0
Calcium (Total)	53 mg/L	0.2	EPA 200.7
Magnesium (Total)	12 mg/L	0.1	EPA 200.7
COD	7.7 mg/L	10	SM5220C
Nitrogen, Ammonia	0.15 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	1.5 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.079 mg/L	0.05	SM4500P-E
TKN	0.47 mg/L	0.4	SM4500N(Org)-D
TOC	2.1 mg/L	1	SM5310C

Indiana Department of Environmental Management

Office of Water Quality-Watershed Assessment and Planning Branch

Surface Water Results Summary

SiteID: WEM070-0036

Sample Date: 4/12/2021

IDEM Sample #: AB46240

Water Flow Type Run

Water Appearance Brown

Water Depth Algae?

Water Flow (cf/sec):

Flow Estimated?

Aquatic Life?

Canopy Closed % 0-20%

Sampler Comments:

Lab ID #:	Result	Reporting Limit	Method
% Sat	88 %		ASTM D888-09(C)
DO	9.25 mg/L		ASTM D888-09(C)
pH (Field)	7.92 SU		EPA 150.2
Specific Conductance (Field)	244 umho/cm		SM2510B
Temperature	13.1 °C		SM2550B(2)
Turbidity (Hach)	67 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

Lab ID #: 500-197635-6	Result	Reporting Limit	Method
Alkalinity (as CaCO3)	93 mg/L	5	SM2320B
Chloride	9.4 mg/L	1	EPA 300.0
Hardness (as CaCO3)	110 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	49 mg/L	5	SM2540D
Solids, Total (TS)	180 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	150 mg/L	10	SM2540C
Sulfate	9.8 mg/L	1	EPA 300.0
Calcium (Total)	33 mg/L	0.2	EPA 200.7
Magnesium (Total)	7.6 mg/L	0.1	EPA 200.7
COD	26 mg/L	10	SM5220C
Nitrogen, Ammonia	0.2 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.73 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.22 mg/L	0.05	SM4500P-E
TKN	0.99 mg/L	0.4	SM4500N(Org)-D
TOC	7.2 mg/L	1	SM5310C

Lab ID #: AB46240	Result	Reporting Limit	Method
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

Weather Code Definitions				
SC	WD	WS	AT	
Sky Conditions	Wind Direction	Wind Strength	Air Temp	
1 - Clear	8 - Rain	0 North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9 East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18 South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27 West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist			4 - Mod./Strong	5 - 76-85
6 - Fog			5 - Strong	6 - > 86
7 - Shower			6 - Gale	

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

SiteID: WEM070-0001 **USGS Hydrologic Unit:** 051202070701
Stream Name: Vernon Fork Muscatatuck River **County:** Jennings
Description: CR 60 South, Vernon **Latitude:** 38 58 34.90130 **Longitude:** -85 37 11.37519
Drainage: 198 **Site Number:** 21T-025

SiteID: WEM070-0001 **Sample Date:** 4/12/2021 **IDEM Sample #:** AB46239
Water Flow Type Run **Water Appearance** Brown **Water Depth** **Algae?**
Water Flow (cf/sec): **Flow Estimated?** **Aquatic Life?** **Canopy Closed %** 0-20%
Sampler Comments:

<u>Lab ID #:</u>	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
% Sat	91.1 %		ASTM D888-09(C)
DO	9.6 mg/L		ASTM D888-09(C)
pH (Field)	7.93 SU		EPA 150.2
Specific Conductance (Field)	234 umho/cm		SM2510B
Temperature	13 °C		SM2550B(2)
Turbidity (Hach)	59.5 NTU		EPA 180.1
Air Temp	3 Lookup		Observation
Sky Conditions	2 Lookup		Observation
Wind Direction	0 Lookup		Observation
Wind Strength	0 Lookup		Observation

<u>Lab ID #:</u> 500-197635-5	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Alkalinity (as CaCO3)	89 mg/L	5	SM2320B
Chloride	10 mg/L	0.4	EPA 300.0
Hardness (as CaCO3)	100 mg/L	0.91	SM2340B
Solids, Suspended Total, (TSS)	29 mg/L	5	SM2540D
Solids, Total (TS)	160 mg/L	10	SM2540B
Solids, Total Dissolved (TDS)	150 mg/L	10	SM2540C
Sulfate	9.4 mg/L	0.2	EPA 300.0
Calcium (Total)	30 mg/L	0.2	EPA 200.7
Magnesium (Total)	6.8 mg/L	0.1	EPA 200.7
COD	30 mg/L	10	SM5220C
Nitrogen, Ammonia	0.23 mg/L	0.2	SM4500NH3-G
Nitrogen, Nitrate+Nitrite	0.73 mg/L	0.1	SM4500NO3-F
Phosphorus, Total	0.32 mg/L	0.05	SM4500P-E
TKN	1.2 mg/L	0.4	SM4500N(Org)-D
TOC	7.7 mg/L	1	SM5310C

<u>Lab ID #:</u> AB46239	<u>Result</u>	<u>Reporting Limit</u>	<u>Method</u>
Coliforms (Total)	> 2419.6 MPN/100mL	2419.6	SM9223B
E. coli	> 2419.6 MPN/100mL	2419.6	SM9223B

**Indiana Department of Environmental Management
Office of Water Quality-Watershed Assessment and Planning Branch
Surface Water Results Summary**

Weather Code Definitions					
SC Sky Conditions		WD Wind Direction		WS Wind Strength	AT Air Temp
1 - Clear	8 - Rain	0	North (0 Degrees)	0 - Calm	1 - < 32
2 - Scattered	9 - Snow	9	East (90 Degrees)	1 - Light	2 - 33-45
3 - Partly	10 - Sleet	18	South (180 Degrees)	2 - Mod./Light	3 - 46-60
4 - Cloudy		27	West (270 Degrees)	3 - Moderate	4 - 61-75
5 - Mist				4 - Mod./Strong	5 - 76-85
6 - Fog				5 - Strong	6 - > 86
7 - Shower				6 - Gale	